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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/762,329

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Douglas James Weatherall

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27160

7590

06/22/2007

PATENT ADMINISTRATOR

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EXAMINER

HEITBRINK, JILL LYNNE

ART UNIT

PAPER NUMBER

1732

MAIL DATE

DELIVERY MODE

06/22/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                               |                                   |  |
|------------------------------|-------------------------------|-----------------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>10/762,329 | Applicant(s)<br>WEATHERALL ET AL. |  |
|                              | Examiner<br>Jill L. Heitbrink | Art Unit<br>1732                  |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2007.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10-21, 24-29, 32-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-8 and 33-40 is/are allowed.
- 6) ☒ Claim(s) 10, 11, 16, 21, 24-29 and 32 is/are rejected.
- 7) ☒ Claim(s) 13-15 and 17-20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 April 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Claim Rejections - 35 USC § 101***

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 24-29 and 32 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claim should be amended to clearly define a structure. It is suggested that the term "computer program element" be changed to --computer program product--.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 10 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Fujita et al. Pat. No. 5,013,231.

3. Fujita discloses a program control means for controlling the rotation of the screw and the backpressure during axial movement including the rotational speed of the screw being above zero for a substantial period of the operation, see abstract and claim 1 in columns 7 and 8. The rotation of the screw inherently caused plasticization. Therefore, the plasticizing (kneading) in Fujita would have been during the rotation of the screw

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always above zero revolutions per minute since the stopping of the screw rotation would stop the plasticizing.

4. Claims 10 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Koike et al. Pat No. 6,059,556.

5. Koike discloses a reciprocating screw 4 with a means for varying the rotation of the screw (motor 52) and a means for developing the back pressure and axial movement (motor 44). These motors control the recovery rate during screw recovery and injection phases. The rotation of the screw inherently caused plasticization. Therefor, the plasticizing (charging) in Koike would have been during the rotation of the screw always above zero revolutions per minute since the stopping of the screw rotation would stop the plasticizing.

6. Claims 11, 24 and 29 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Seta Publication No. 2003/0034577.

Seta discloses the controller for an injection molding machine to control the axial reciprocating [0021] and continuously rotating of the feed screw [0018] [0038] and the intermittent control of the rotary pump to control the pressure into the mold. As to claim 24, "As a general rule, where software constitutes part of a best mode of carrying out an invention, description of such a best mode is satisfied by a disclosure of the functions of the software. This is because, normally, writing code for such software is within the skill of the art, not requiring undue experimentation, once its functions have been disclosed. . . . [F]low charts or source code listings are not a requirement for adequately disclosing

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the functions of software." *Fonar Corp.*, 107 F.3d at 1549, 41 USPQ2d at 1805 (citations omitted). See MPEP 2163.

7. Claim 16 and 21 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Breher et al. Pat. No. 3,020,591.

8. Breher discloses a screw 14 with a non-return valve 26, a first actuator to effect relative movement between the screw and the barrel (col. 6, lines 3-9), a second actuator coupled to the screw to control rotational speed of the screw (col. 6, lines 21-25 and 38-40), and a controller (col. 7, lines 60-74) for operating the worm 14 uninterruptedly or continuously (col. 1, lines 65-70, col. 2, lines 47-51, and col.6, lines 19-25)

#### ***Allowable Subject Matter***

9. Claims 1-8 and 33-40 are allowed.

10. Claims 13-15 and 17-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

11. Applicant's arguments filed April 16, 2007 have been fully considered but they are not persuasive.

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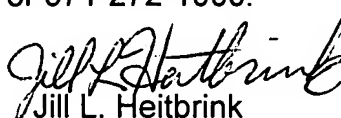
12. Applicant argues that Fujita '231 stops rotation during an injection molding cycle. However, claim 10 has been amended such that only the rotational speed "during plasticizing" is above zero revolutions per minute. For plasticizing to occur, the screw must be rotated since the screw rotation cause plasticizing. Therefor, in Fujita '231 the preparation of the shot would inherently involve the rotation of the screw for the plasticizing to occur during plasticizing.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill L. Heitbrink whose telephone number is (571) 272-1199. The examiner can normally be reached on Monday-Friday 9 am -2 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Jill L. Heitbrink  
Primary Examiner  
Art Unit 1732

jlh